

# ***Interactive comment on “Organosulfates in Atlanta, Georgia: Anthropogenic influences on biogenic secondary organic aerosol formation” by Anusha Priyadarshani Silva Hettiyadura et al.***

## **Anonymous Referee #2**

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### General comments

The study examines the influence of anthropogenic emissions to formation of organosulfates in an urban site in the Southeastern United States (SE-US). This is achieved by quantifying the major organosulfates from ambient measurements and comparing the identified compounds with those from laboratory experiment and a rural site in the SE-US, and other tracers measurements. The study reveals an enhanced formation of isoprene-derived organosulfate concentration, particularly the 2-methylglyceric acid sulfate which is known to be a tracer for high-NO<sub>x</sub> isoprene-derived secondary organic aerosol (SOA) formation mechanism. The general objective is clear

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and the methods are well executed. There are some minor errors in the manuscript and some clarifications needed. Overall, I recommend accepting this manuscript for publication after corrections as detailed in the following.

#### Technical comments

Define abbreviations at their first appearance when you are using them repeatedly, such as: GA (Pg 1 Ln 12), AL (Pg 1 Ln 22)

Pg 1 Ln 11: add (US) after Southeastern United States

Pg 7 Lns 12-15: It is said here that the correlation between 2-methylglyceric acid sulfate with 2-methylglyceric acid is significant at  $r = 0.608$ . Based on description in Section 2.7, this correlation values is classified to be moderate. The use of “significant” is ambiguous, as it may be inferred as “strong”. I recommend being consistent with the classification and description throughout the text.

Pg 11 Ln 30: insert “an authentic” before standard development.

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